

Method and apparatus for separating particles

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Abstract

PCT No. PCT/AT89/00098 Sec. 371 Date Jul. 3, 1990 Sec. 102(e) Date Jul. 3, 1990 PCT Filed Nov. 3, 1989 PCT Pub. No. WO90/05008 PCT Pub. Date May 17, 1990. Method and apparatus for separating particles (1) which are dispersed in a dispersion medium, whereby an ultrasonic standing wave (3) is generated by means of a composite resonator in a vessel (8) containing dispersion (2), the frequency of said wave preferably being in the neighborhood of the characteristic frequency (f_0). In order to achieve, a better separation of the particles it is provided that the amplitudes (V) of the sound particle velocity which appear in the sound field are chosen slightly smaller than the upper threshold amplitude (V_{max}), and that pressure forces on the dispersed particles (1), which result from the acoustic stream of the dispersion medium caused by applied sound, are equivalent to the longitudinal holding forces of the dispersed particles (1) in the areas of the antinodes (11) and nodes (12), and furthermore that the frequency by means of which the composite resonator is driven is as precisely as possible tuned to one of the resonant frequencies (f_n).

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